

WHAT IS CLAIMED IS:

1. A cutting device for use in a medical procedure, comprising:
a housing having a housing cavity and defining a first cutting surface;
an actuator positioned within said housing cavity and having a cam groove formed therein;

a cutting member positioned within said housing cavity and having a cam follower, said cutting member defining a second cutting surface;

a driver configured to move in relation to said housing;

wherein movement of said driver in relation to said housing causes said actuator to move within said housing cavity,

wherein movement of said actuator within said housing cavity causes said cam groove to cooperate with said cam follower so as to rotate said cutting member relative to said housing, and

wherein rotation of said cutting member relative to said housing causes said second cutting surface to move relative to said first cutting surface to effectuate a cutting operation.

2. The cutting device of claim 1, wherein said cutting member includes:

a cylindrical shaft defining an outer surface, and

said cam follower includes at least one protrusion extending outwardly from said outer surface.

3. The cutting device of claim 2, wherein:

said cam groove defines a cam groove surface, and

movement of said actuator within said housing cavity causes said cam groove surface to cooperate with said at least one protrusion to rotate said cutting member relative to said housing.

4. The cutting device of claim 1, further comprising a spring positioned within said housing cavity, wherein:

said first cutting surface and said second cutting surface are movable in relation to each other between a first relative orientation and a second relative orientation, and

said spring is operable to bias said first cutting surface and said second cutting surface into said first orientation.

5. The cutting device of claim 1, wherein:

said driver includes a first threaded portion,

said housing includes a second threaded portion which is configured to threadably engage said first threaded portion, and

movement of said driver relative to said housing while said first threaded portion is threadably engaged to said second threaded portion causes said actuator to move within said housing cavity.

6. The cutting device of claim 5, wherein:
said driver includes (i) an end cap defining said first threaded portion, and (ii)
a drive shaft attached to said end cap, and
said drive shaft contacts said actuator during movement of said driver relative
to said housing.

7. The cutting device of claim 1, wherein:
said housing has an increased diameter portion and a reduced diameter
portion,
said first cutting surface is defined on said reduced diameter portion,
said reduced diameter portion defines a reduced diameter cavity, and
said cutting member is at least partially positioned in said reduced diameter
cavity so that said second cutting surface is positioned adjacent to said first cutting
surface.

8. The cutting device of claim 7, wherein:
said increased diameter portion defines an increased diameter cavity, and
said actuator is positioned within said increased diameter cavity.

9. The cutting device of claim 7, wherein:
said reduced diameter portion has a polygonal opening defined therein, and
said polygonal opening is defined at least in part by said first cutting surface.

10. The cutting device of claim 1, wherein:
said housing defines a plurality of internal flutes,
said actuator defines a plurality of external flutes, and
said plurality of internal flutes cooperate with said plurality of external flutes so
as to facilitate axial movement of said actuator within said housing cavity.

11. A cutting device for use in a medical procedure, comprising:
a housing having a housing cavity and defining a first cutting surface;
an actuator positioned within said housing cavity and having a cam groove
defining a cam groove surface formed therein;

a cutting member positioned within said housing cavity and having at least
one protrusion extending outwardly therefrom, said cutting member defining a
second cutting surface;

wherein movement of said actuator within said housing cavity causes said
cam groove surface to cooperate with said at least one protrusion so as to rotate
said cutting member relative to said housing, and

wherein rotation of said cutting member relative to said housing causes said
second cutting surface to move relative to said first cutting surface to effectuate a
cutting operation.

12. The cutting device of claim 11, further comprising a spring positioned within said housing cavity, wherein:

said first cutting surface and said second cutting surface are movable in relation to each other between a first relative orientation and a second relative orientation, and

said spring is operable to bias said first cutting surface and said second cutting surface into said first orientation.

13. The cutting device of claim 11, further comprising a driver configured to move in relation to said housing,

wherein movement of said driver in relation to said housing causes said actuator to move within said housing cavity.

14. The cutting device of claim 13, wherein:

said driver includes a first threaded portion,

said housing includes a second threaded portion which is configured to threadably engage said first threaded portion, and

movement of said driver relative to said housing while said first threaded portion is threadably engaged to said second threaded portion causes said actuator to move within said housing cavity.

15. The cutting device of claim 14, wherein said driver includes:
an end cap defining said first threaded portion,
a drive shaft attached to said end cap,
said drive shaft contacts said actuator during movement of said driver relative
to said housing.

16. The cutting device of claim 11, wherein:
said housing has an increased diameter portion and a reduced diameter
portion,
said first cutting surface is defined on said reduced diameter portion,
said reduced diameter portion defines a reduced diameter cavity, and
said cutting member is at least partially positioned in said reduced diameter
cavity so that said second cutting surface is positioned adjacent to said first cutting
surface.

17. The cutting device of claim 16, wherein:
said increased diameter portion defines an increased diameter cavity, and
said actuator is positioned within said increased diameter cavity.

18. The cutting device of claim 11, wherein:
said housing defines a plurality of internal flutes,
said actuator defines a plurality of external flutes, and
said plurality of internal flutes cooperate with said plurality of external flutes so
as to facilitate axial movement of said actuator within said housing cavity.

19. A cutting device for use in a medical procedure, comprising:
a housing having a housing cavity and defining a first cutting surface,
an actuator positioned within said housing cavity and having a first cam
member;

a cutting member positioned with said housing cavity and having a second
cam member, said cutting member defining a second cutting surface;

wherein movement of said actuator within said housing cavity causes said
first cam member to cooperate with said second cam member so as to rotate said
cutting member relative to said housing, and

wherein rotation of said cutting member relative to said housing causes said
second cutting surface to move relative to said first cutting surface to effectuate a
cutting operation.

20. The cutting device of claim 19, wherein:
said first cam member includes a cam groove,
said second cam member includes a cam follower, and
said cam follower rides within said cam groove during movement of said actuator within said housing.

21. The cutting device of claim 20, wherein said cutting member includes:
a cylindrical shaft defining an outer surface, and
at least one protrusion extending outwardly from said outer surface.

22. The cutting device of claim 21, wherein:
said cam groove defines a cam groove surface, and
movement of said actuator within said housing cavity causes said cam groove surface to cooperate with said at least one protrusion to rotate said cutting member relative to said housing.

23. The cutting device of claim 19, wherein:
said actuator has an actuator cavity,
said first cam member is located within said actuator cavity.

24. The cutting device of claim 23, wherein said second cam member is located within said actuator cavity during movement of said actuator within said housing cavity.

25. The cutting device of claim 19, further comprising a spring positioned within said housing cavity, wherein:

said first cutting surface and said second cutting surface are movable in relation to each other between a first relative orientation and a second relative orientation, and

said spring is operable to bias said first cutting surface and said second cutting surface into said first orientation.

26. The cutting device of claim 23, further comprising a spring positioned within said actuator cavity, wherein:

said actuator and said cutting member are movable in relation to each other between a first relative orientation and a second relative orientation, and

said spring is operable to bias said actuator and said cutting member into said first orientation.

27. The cutting device of claim 19, further comprising a driver configured to move in relation to said housing,

wherein movement of said driver in relation to said housing causes said actuator to move within said housing cavity.

28. The cutting device of claim 27, wherein:

said driver includes a first threaded portion,

said housing includes a second threaded portion which is configured to threadably engage said first threaded portion, and

movement of said driver relative to said housing while said first threaded portion is threadably engaged to said second threaded portion causes said actuator to move within said housing cavity.

29. The cutting device of claim 28, wherein said driver includes:

an end cap defining said first threaded portion,

a drive shaft attached to said end cap,

said drive shaft contacts said actuator during movement of said driver relative to said housing.

30. The cutting device of claim 19, wherein:

said housing has an increased diameter portion and a reduced diameter portion,

said first cutting surface is defined on said reduced diameter portion,

said reduced diameter portion defines a reduced diameter cavity, and

said cutting member is at least partially positioned in said reduced diameter cavity so that said second cutting surface is positioned adjacent to said first cutting surface.

31. The cutting device of claim 30, wherein:

said increased diameter portion defines an increased diameter cavity, and
said actuator is positioned within said increased diameter cavity.

32. The cutting device of claim 30, wherein:

said reduced diameter portion has a polygonal opening defined therein, and
said polygonal opening is defined at least in part by said first cutting surface.

33. The cutting device of claim 32, wherein said polygonal opening is a
hexagonal opening.

34. The cutting device of claim 19, wherein:

said housing defines a plurality of internal flutes,
said actuator defines a plurality of external flutes, and
said plurality of internal flutes cooperate with said plurality of external flutes so
as to facilitate axial movement of said actuator within said housing cavity.